Amendments to the Specification

Please amend the title as follows:

~~Magnetic resonance imaging method~~
SYSTEM AND METHOD OF MAGNETIC RESONANCE IMAGING FOR PRODUCING SUCCESSIVE MAGNETIC RESONANCE IMAGES

Please insert the following new paragraph immediately following paragraph **[0020]**:

The present invention and the subject matter of U.S. Patent No. 7,005,853 B2 to Tsao et al. were made by or on behalf of the parties to a joint research agreement within the meaning of U.S.C. § 103(c)(3), the parties being Philips Medical Systems Nederland B.V. (an affiliate company of Koninklijke Philips Electronics N.V.), Universität Zürich and ETH Zürich.

Please amend paragraph [0027] as follows:

[0027] The present invention is further based on the observation that the eddy-current artifacts are drastically amplified with accelerated data acquisition. As a result, an eddy-current reduction technique, such as the said technique, must be used, even in the case of 2D imaging. In the said technique for eddy-current reduction, an alternating profile order is used to minimize the large jumps in *k*-space. For example, in 2D real-time imaging, the profiles are ordered such that *k*-space is swept along one direction at one time point, and along the opposite direction in the next time point (see arrow indicating seep direction in Figures 5c and 5d). This profile order significantly reduces the image artifacts both in normal unaccelerated acquisition 22 (Figure 5c) and in highly accelerated (e.g. 8-fold) acquisition 23 (Figure 5d). In cine 3D acquisition, consecutive profiles in the k_y-k_z plane are traversed in a contiguous fashion with the overall direction of sampling being reversed for odd cardiac phases (Figure 4b). Thus, the eddy-current reduction technique employs alternating sweep directions in sampling k-space. This alternating profile order scheme for subsequent k_z profiles and cardiac phases reduces eddy-current related distortions by ensuring maximum compensation of phase-encode gradient lobes, which leads to substantial reduction in image artifacts. (Figure 4d) 18.